UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 HAWTHORNE STREET
SAN FRANCISCO, CALIFRONIA 94105

ENFORCEMENT AND COMPLIANCE
ASSURANCE DIVISION

DATE:

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Bakersfield Sanitary Landfill, Bakersfield, California

FROM: Tyler Holybee, Environmental Engineer
Air Section, Air, Waste & Chemicals Branch,
Enforcement and Compliance Assurance Division

THRU: Roshni Brahmbhatt, Manager
Air Section, Air, Waste & Chemicals Branch,
Enforcement and Compliance Assurance Division

TO: File

BASIC INFORMATION

Facility Name: Bakersfield Sanitary Landfill

Facility Location: County Dump Rd, Bakersfield, California 93306

Date of Inspection: April 14, 2023

EPA Inspectors:
1. Tyler Holybee, Environmental Engineer
2. Scott Connolly, Environmental Engineer
3. Andrew Chew, Environmental Engineer
4. Connie L Hernandez, Environmental Scientist

Other Attendees
1. Jesus Carrera, Supervisor II, City of Bakersfield Public Works Department
2. Josue Gonzales, Senior Air Inspector, San Joaquin Valley Air Pollution Control District

Contact Email Address: JamesLeonard@bakersfieldcity.us – Superintendent, City of Bakersfield Solid Waste Division

Purpose of Inspection: To determine compliance with the Clean Air Act State Implementation Plan for San Joaquin Valley Air Pollution Control District (SJVAPCD). This inspection was conducted as a follow-up from a citizen complaint regarding methane emissions.

Facility Type: Closed Municipal Solid Waste Landfill

Arrival Time: 9:30 AM
Departure Time: 12:20 PM

Inspection Type: Unannounced Inspection

OPENING CONFERENCE

☒ Credentials Presented
☒ CBI warning to facility provided

The following information was obtained verbally from Jesus Carrera unless otherwise noted.

Facility and Process Description:
Bakersfield Sanitary Landfill is a municipal solid waste landfill owned by the City of Bakersfield that closed in 1992. The Landfill collects landfill gas from 47 active gas wells. There are inactive and disconnected wells on site. The Landfill gas is routed by a blower under induced convection through a water condenser and three carbon cannisters. The carbon cannisters are arranged in a two parallel, one in series path. There is piping capable of changing the path or bypassing the cannisters entirely. The carbon cannister control system was installed in 2019, which replaced the flare system.

Staff Interview:
The collection system is monitored almost every Wednesday with a GEM5000. Each event a portion of the total wells onsite for wellhead parameters. The cannisters are replaced every two years. The cannisters were last replaced the month prior to the inspection. The blower was replaced the week prior to the inspection.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:
Using a toxic vapor analyzer (TVA), EPA and SJVAPCD measured 36,000 ppm and 34,000 ppm respectively at the sample port on the outlet stack located above the flame arrestor junction. EPA and SJVAPCD both measured 50,000+ ppm at the sample port located below the flame arrestor junction below the flame arrestor, measuring above the device's maximum threshold. Measurements were taken at both the beginning and end of the tour.

EPA used an infrared FLIR camera to visualize emissions emanating from the outlet stack of the control system. The videos corroborate the measurements taken with the TVAs at the sample ports. Videos were taken both at the beginning and end of the tour.

Photos and/or Videos: were taken during the inspection.
Connie Hernandez took photos using a digital camera. Andrew Chew used a FLIR camera to take videos of leaks. The FLIR camera corroborated the measurements taken at the outlet stack.

Field Measurements: were taken during this inspection.
EPA used a TVA 2020 calibrated with methane to measure hydrocarbons. SJVAPCD also used a TVA 2020 calibrated with methane to confirm measurements. A measurement log is attached in Appendix B. All measurement were confirmed by SJVAPCD. Measurements were also taken at 22 wells or well groups, although no readings above 500 ppm were identified.

CLOSING CONFERENCE

The following area of concern was conveyed to Bakersfield Sanitary Landfill staff. Observations and areas of concern do not indicate a compliance determination.

The measurements made by the TVAs and FLIR camera suggest that the control system is not functioning as intended and allowed untreated or only partially treated landfill gas to be emitted from the system via the outlet stack.

SIGNATURES

Report Author

Holybee, Tyler Digitally signed by Holybee, Tyler
Date: 2023.06.13 08:47:27 -07'00'

Section Manager: Brahmbhatt, Roshni Digitally signed by Brahmbhatt, Roshni
Date: 2023.06.20 09:23:41 -07'00'

APPENDICES AND ATTACHMENTS

Appendix A – Digital Image and Video Log
Appendix B – Field Measurement Log

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Connie L Hernandez (digital camera) Andrew Chew (FLIR camera)	**2. Date of Inspection:** April 14, 2023
3. Company/Facility Name: Bakersfield Sanitary Landfill	**4. Street Address, City, State:** County Dump Rd, Bakersfield**,** California
5. Number of Image, videos: 57 images, 25 videos	**6. Archival Record Location:** EPA SharePoint Inspection File

Image Number	File Name	Date and Time	Description of Image
1	P4140196.JPG	4/14/2023 9:58	As built map, edited
2	P4140197JPG	4/14/2023 9:58	Digital readout – carbon cannister temps, pressures, flows
3	P4140198.JPG	4/14/2023 10:02	Digital readout – flare station
4	P4140199.JPG	4/14/2023 10:02	Digital readout – flare station monthly LFG total (1 or 3)
5	P4140200.JPG	4/14/2023 10:02	Digital readout – flare station monthly LFG total (2 or 3)
6	P4140201.JPG	4/14/2023 10:02	Digital readout – flare station monthly LFG total (3 or 3)
7	P4140202.JPG	4/14/2023 10:02	Digital readout – monthly methane total (1 of 3)
8	P4140203.JPG	4/14/2023 10:03	Digital readout – monthly methane total (2 of 3)
9	P4140204.JPG	4/14/2023 10:03	Digital readout – monthly methane total (3 of 3)
10	P4140205.JPG	4/14/2023 10:26	Control system outlet stack and flame arrestor
11	P4140206.JPG	4/14/2023 10:27	Outlet stack
12	P4140207.JPG	4/14/2023 10:27	Blower and unused cannisters in background
13	P4140208.JPG	4/14/2023 10:27	Carbon cannisters in use
14	P4140209.JPG	4/14/2023 10:27	Water condenser and carbon cannisters in background
15	20230414_174335187_iOS.heic	4/14/2023 10:43	Unlabeled well 1
16	20230414_174457818_iOS.heic	4/14/2023 10:44	Unlabeled well 1 sticker 1
17	20230414_174501723_iOS.heic	4/14/2023 10:45	Unlabeled well 1 sticker 2
18	20230414_174644831_iOS.heic	4/14/2023 10:46	Unlabeled well 2
19	20230414_175112504_iOS.heic	4/14/2023 10:51	Unlabeled well 3
20	20230414_175511253_iOS.heic	4/14/2023 10:55	Survey position (not a well)
21	20230414_175521923_iOS.heic	4/14/2023 10:55	Survey position (not a well)
22	20230414_180108960_iOS.heic	4/14/2023 11:01	Unlabeled well 4

23	20230414_181515638_iOS.heic	4/14/2023 11:01	Unlabeled well 5 and 6
24	20230414_181646389_iOS.heic	4/14/2023 11:15	Unlabeled well 5 sticker
25	20230414_181810707_iOS.heic	4/14/2023 11:16	Unlabeled well 7 and 8
26	20230414_182015504_iOS.heic	4/14/2023 11:18	Unlabeled well 7 sticker
27	20230414_182021153_iOS.heic	4/14/2023 11:20	Unlabeled well 8 sticker
28	20230414_182219070_iOS.heic	4/14/2023 11:20	Unlabeled well 9 and 10
29	20230414_182431259_iOS.heic	4/14/2023 11:22	Unlabeled well 9 tag
30	20230414_182447653_iOS.heic	4/14/2023 11:24	Unlabeled well 10 tag
31	20230414_182545141_iOS.heic	4/14/2023 11:24	Unknown Access box 1
32	20230414_182623665_iOS.heic	4/14/2023 11:25	Unknown Access box 2
33	20230414_182847463_iOS.heic	4/14/2023 11:26	Unlabeled well 11
34	20230414_182935715_iOS.heic	4/14/2023 11:28	Unknown Access box 3
35	20230414_182942746_iOS.heic	4/14/2023 11:29	Unknown Access box 4
36	20230414_183052590_iOS.heic	4/14/2023 11:29	Unlabeled well 12
37	20230414_183255471_iOS.heic	4/14/2023 11:30	Unlabeled well 13 and 14
38	20230414_183331468_iOS.heic	4/14/2023 11:32	Unlabeled well 13 tag
39	20230414_183338810_iOS.heic	4/14/2023 11:33	Unlabeled well 15 and 16
40	20230414_183351275_iOS.heic	4/14/2023 11:33	Unknown Access box 4
41	20230414_183616979_iOS.heic	4/14/2023 11:33	Unlabeled well 17
42	20230414_183944043_iOS.heic	4/14/2023 11:36	Unlabeled well 18 (disconnected)
43	20230414_184255185_iOS.heic	4/14/2023 11:39	Unlabeled well 19
44	20230414_184428284_iOS.heic	4/14/2023 11:42	Unlabeled well 20
45	20230414_184504109_iOS.heic	4/14/2023 11:44	Unlabeled well 21 and 22
47	20230414_184542916_iOS.heic	4/14/2023 11:45	Unlabeled well 21 tag
48	20230414_184559133_iOS.heic	4/14/2023 11:45	Unlabeled well 22 tag
49	20230414_184652181_iOS.heic	4/14/2023 11:45	Unlabeled well 23 and 24
50	20230414_184753386_iOS.heic	4/14/2023 11:46	Unlabeled well 25 and 26
51	20230414_184909920_iOS.heic	4/14/2023 11:47	Unlabeled well 27 and 28
52	20230414_185127878_iOS.heic	4/14/2023 11:49	Unlabeled well 29
53	20230414_185206947_iOS.heic	4/14/2023 11:51	Unlabeled well 29 sticker
54	20230414_185346632_iOS.heic	4/14/2023 11:52	Unlabeled well 30 and 31
55	20230414_185415545_iOS.heic	4/14/2023 11:53	Unlabeled well 30 sticker
56	20230414_185420206_iOS.heic	4/14/2023 11:54	Unlabeled well 31 sticker
57	20230414_185456675_iOS.heic	4/14/2023 11:54	Unknown access box 5
58	20230414_185553042_iOS.heic	4/14/2023 11:55	Unlabeled well 32

Video Number	File Name	Date (time was not correctly recorded)	Description of Image
1	MOV_0288.mp4	4/14/2023	Emissions exiting the outlet stack of the control system
2	MOV_0290.mp4	4/14/2023	Emissions exiting the outlet stack
3	MOV_0292.mp4	4/14/2023	Emissions exiting the outlet stack
4	MOV_0302.mp4	4/14/2023	Unlabeled well group

5	MOV_0304.mp4	4/14/2023	Unlabeled access box
6	MOV_0305.mp4	4/14/2023	Unlabeled access box
7	MOV_0306.mp4	4/14/2023	Unlabeled access box
8	MOV_0307.mp4	4/14/2023	Unlabeled well
9	MOV_0308.mp4	4/14/2023	Unlabeled well
10	MOV_0309.mp4	4/14/2023	Unlabeled well
11	MOV_0310.mp4	4/14/2023	Unlabeled well
12	MOV_0311.mp4	4/14/2023	Unlabeled well
13	MOV_0312.mp4	4/14/2023	Unlabeled well group
14	MOV_0313.mp4	4/14/2023	Unlabeled well group
15	MOV_0314.mp4	4/14/2023	Unlabeled well
16	MOV_0315.mp4	4/14/2023	Unlabeled well
17	MOV_0316.mp4	4/14/2023	Unlabeled well group
18	MOV_0317.mp4	4/14/2023	Unlabeled well group
19	MOV_0318.mp4	4/14/2023	Unlabeled well group
20	MOV_0319.mp4	4/14/2023	Unlabeled well group
21	MOV_0320.mp4	4/14/2023	Unlabeled well group
22	MOV_0321.mp4	4/14/2023	Unlabeled access box
23	MOV_0322.mp4	4/14/2023	Unlabeled access box
24	MOV_0323.mp4	4/14/2023	Unlabeled well
25	MOV_0324.mp4	4/14/2023	Emissions exiting the outlet stack (far)

Facility Name: Bakersfield Sanitary Landfill
Facility Location: County Dump Rd, Bakersfield, California
Date of Inspection: April 14, 2023

APPENDIX B: FIELD MEASUREMENT DATA

Scott Connolly operated a TVA 2020 calibrated before the facility tour at approximately 9:30 am with methane gas at 0 ppm, 500 ppm, and 10,000 ppm. Andrew Chew recorded the leaks with a FLIR camera. EPA monitored a total of 22 wells or well groups and the control system during the inspection. All measurements occurred between 10 am and 12 pm on 4/14/23. The following leaks were identified:

Calibration Log			
Calibration Gas	Lot number	Expiration Date	Reading
Zero Air	304-402150192-1	07/22/2025	-0.2 ppm
500 ppm	304-402174098-1	07/22/2025	493 ppm
10,000 ppm	304-402174099-1	07/22/2025	0.99% (about 9,990 ppm)

Location	**Date & time**	**TVA Measurement (ppm)**
Sample Valve on outlet stack above flame arrestor	4/14/23 10:26	36,000 maximum
Sample Valve on outlet stack below flame arrestor	6/23/2022 10:16	50,000+ maximum (above instrument capability)